Schizophrenic autism: clinical phenomenology and pathogenetic implications

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The purpose of this contribution is to address, from a phenomenologically informed empirical perspective, the essential clinical features of the schizophrenia spectrum disorders and to suggest their potential import for pathogenetic research and clinical praxis. The very concept and the phenotypic boundaries of schizophrenia are still unclear and continue to stir up intense controversies (for a comprehensive debate, see 1). Recent worldwide attempts to establish programs for early detection and therapeutic intervention in schizophrenia have inadvertently revealed an embarrassing lacuna in the contemporary operationalist psychopathology, i.e., a lack of descriptions of subtle pathology that might be useful for early, prodromal diagnosis (2). This state of affairs is, to a non-trivial extent, caused by a dramatic simplification of psychopathology that has taken place over the last decades, now echoed by raising concerns expressed in the editorials of major journals (3-6). The operational diagnostic criteria specify in detail *what schizophrenia is not* (e.g. not an affective or organic disorder) rather than affording the psychiatrist with a solid conceptual-clinical grip of *what it is* (3). Yet, a crucial and primary component of the diagnostic validity is exactly to offer a certain conceptualization or *typification* of what a given disorder is in the first place (7), an aspect that is conspicuously absent in the contemporary nosological debates. All classic psychopathologists agreed that, diagnostically speaking, a certain characteristic *Gestalt*, irreducible to single symptoms or signs, distinguished the schizophrenia spectrum from other disorders. The terms used in this context were 'diagnosis through intuition' (8), 'atmospheric diagnosis' (9), 'Praecox Gefühl' (10), and 'diagnostic par pénétration' (11). All these terms converge in pointing to an intersubjective nature of this Gestalt. The concept of autism, introduced by Bleuler in 1911 (12), was the first thorough attempt to capture the clinical essence of schizophrenia and therefore played an important role in its definitions until the advent of the operational criteria. It will serve us as a departure in addressing the phenomenology of the trait features of the schizophrenia spectrum disorders.

HISTORICAL ORIGINS: 'WITHDRAWAL TO INNER LIFE' AND 'LOSS OF VITAL CONTACT WITH REALITY'

Bleuler defined autism as a detachment from reality associated with rich fantasy life:

> "The [...] schizophrenics who have no more contact with the outside world live in a world of their own. They have encased themselves with their desires and wishes [...]; they have cut themselves off as much as possible from any contact with the external world. This detachment from reality with the relative and absolute predominance of the inner life, we term autism." (12).

Bleuler considered autism as a pathognomonic feature, specifying the extension of the spectrum concept of the time (i.e., including the schizoid and 'latent' cases). He described a rich variety of clinical manifestations of autism: poor ability to enter into contact with others, withdrawal and inaccessibility (in the extreme cases, negativism), indifference, rigid attitudes and behaviors, deranged hierarchy of values and goals, inappropriate behavior, idiosyncratic logic, and a propensity to delusional thinking. This enumeration demonstrates that autism is resilient to a simple medical definition because none of these manifestations is sufficient or necessary to diagnose autism (13). Moreover, and perhaps most importantly, the criterion 'withdrawal to fantasy life' is empirically false, if taken as a necessary one: there are seemingly extroverted schizophrenics (e.g., certain disorganized patients) as well as patients who do not have a rich fantasy life (14,15). Although Bleuler makes a gesture towards the patient's 'inner life', all clinical features are basically portrayed as '*third-person' phenomena*, i.e., as observable 'external' behaviors or 'signs'. In conclusion, although Bleuler undoubtedly had a profound clinical intuition of the schizophrenic trait phenomena, the conceptual resources at his disposal did not permit a clear articulation of this intuition and therefore limited its pragmatic, diagnostic utility.

Eugène Minkowski, who introduced Bleuler to the French audience, addressed autism in detail in "*La Schizophrénie*" (15), probably the

best clinical text on schizophrenia ever written. He realized, *insightfully*, that schizophrenia *does not* lend itself to a straightforward medical or common-sensical description, *which is uninformed by any overarching considerations on the nature of subjectivity and existence*. Inspired by a Bergsonian philosophical approach, he drew attention to the fact that a mental state should never be treated in isolation, because it is always *a part* expressing *the whole* from which it originates. This whole is the overall *structure of subjectivity*. Every single anomalous mental state is therefore a condensed expression of the *more basic experiential and existential alterations*, comprising, for example, changes in temporalization or alterations in the elementary relatedness to the world. Each major psychiatric syndrome, such as schizophrenia or mood disorder, is characterized by a *specific* pattern of such basic changes, which constitutes its *essence*. This essence or 'trouble générateur' (*generative disorder*) is the subtle *phenomenal core* that transpires through the symptoms, shaping them, keeping them *meaningfully interconnected*, and constraining their long-term evolution. Minkowski considered autism to be *the* 'trouble générateur' of schizophrenia (11,15,16). Autism is not a withdrawal to solitude (it cuts *across* the categories of extro- and introversion) or a morbid inclination to daydreaming, but a deficit in the basic, non-reflective attunement between the person and his world, i.e., a *lack* of "vital contact with reality". Minkowski defined the vital contact as an ability to "resonate with the world", to empathize with others, an ability to become affected and to act suitably, as a pre-reflective immersion in the intersubjective world: "Without being ever able to formulate it, we know what we have to do; and it is that that makes our activity infinitely malleable and human" (16). Manifestations of autism are mainly of a qualitative order, involving a peculiar distortion of the relationship of the person to himself, and of the person to the world and to his fellow men. There is a decline of the dynamic, flexible, and malleable aspects of these relations, and a corresponding predominance of the fixed, static, rational, and objectified elements. Autism is not limited to a peculiar expressivity (e.g., lack of emotional resonance) but transpires as well through *the patient's acting and attitudes*, reflecting a profoundly *changed existential pattern*. Autistic *activity* shows itself not so much through its content or purpose, but more through an inappropriate *manner* by which such content or purpose is enacted, its friction with the situational context. A famous vignette of a schizoid father, who buys, as a Christmas present for his dying daughter, a coffin, illustrates this odd friction. The act is rational from a formal-logical point of view, because a coffin is something that the daughter eventually is going to need, yet nevertheless it is bizarre by any ordinary human standard. 'Autistic attitudes' are either direct manifestations of the lack of vital contact or compensating personality traits that echo the 'trouble générateur'. They comprise 'morbid rationalism' (viewing all human moves as driven by purely logical rules), excessive preoccupations with symmetry and numerical aspects of the world ('geometrism'), excessive fantasy life, and peculiarly lifeless patterns of stereotyped regrets or moodiness. The pure form of autism ('autisme pauvre') manifests itself as sterility, lack of attunement to the world and emptiness, perhaps accompanied by a supervening morbid rationalism. As one of Minkowski's patients expressed it: "I can reason quite well, but only in the absolute, because I have lost contact with life". The 'rich' Bleulerian autism is its *secondary* form, marked by a compensatory upsurge of fantasizing activity. In summary, Minkowski arrived at a better comprehension and provided better clinical descriptions of the fundamental disorders in schizophrenia than did Bleuler, and Minkowski's influence is still perceptible in the contemporary phenomenological approach to schizophrenia (13).

CONTEMPORARY APPROACH: AUTISM AS A DISORDER OF SELF, INTENTIONALITY, AND INTERSUBJECTIVITY

In our view, based on phenomenological and empirical studies (17-20), the schizophrenic autism does not only refer to the various observable (third-person) phenomena of behavior and expression, but, as already alluded to by Minkowski, it also tells us something about the patient's own subjective experience. In fact, several dimensions of subjectivity appear to be affected in autism. There is a unique disturbance of intentionality (e.g., loss of meaning and perplexity), there is a disturbance in the realm of self (an 'unstable first-person perspective' and other anomalous self-experiences), and finally the dimension of intersubjectivity is also fundamentally impaired (disorders of social and interpersonal functioning, inappropriate behavior). These three dimensions are inseparable: *I, we, and the world* belong together (21,22) - and they are all afflicted in the schizophrenic autism.

Thus, in a detailed exploration, Blankenburg (23,24) arrives at a characterization of autism as a "crisis of common sense" or a "loss of natural evidence", where both terms transcend the inner-outer or symptom-sign dichotomy. What is at stake here is not the possession of specific beliefs about the world, nor is it a matter of a practical shrewdness. It is not a question of a sufficient stock of explicit or implicit knowledge (i.e., dispositional beliefs) that can be expressed in sentence-like (propositional) terms: e.g., "I know *that* one has to stop the car at the red light" or "I know *that* one says hello to greet the others". Rather, it is the ability to see things in the appropriate perspective, an *implicit non-conceptual grip* of the 'rules of the game', a *sense of proportion*, a taste for what is adequate and appropriate, likely and relevant. Briefly, it refers to a non-conceptual and non-reflective *indwelling* in the intersubjective world, to an automatic *pre-understanding* of the context and the background, which is a necessary condition for a fluid grasp of the significance of objects, situations, events and other people. Terms such as 'background capacities', 'skillful coping' and 'habitus' in cogni-

tive science, philosophy of mind and social anthropology all overlap, in varying degrees, with the concepts of common sense and natural evidence. Explicit deficits in social propositional knowledge, observable in the advanced stages of schizophrenia, are linked to isolation and defensive withdrawal, which are *consequences* of a 'crisis of common sense' or a 'loss of natural evidence' constituting the more primary vulnerability.

Common sense or natural evidence is constituted by three intertwined moments (i.e., non-independent parts) or aspects: a pre-reflective sense of self (*ipseity*; Latin: ipse = self, itself), a pre-reflective embededness in the world, and a pre-reflective attunement with others. We may speak of a pre-reflective self-awareness whenever we are *directly*, non-inferentially or non-reflectively conscious of our own ongoing thoughts, perceptions, feelings, or pains; these appear in a *first-personal mode of presentation* that immediately reveals them as our own, i.e., it entails a built-in self-reference. In other words, when the experience is given in a first-personal mode of presentation (to me), it is, at least tacitly, given as *my* experience and therefore counts as *a basic self-manifestation*. The pre-reflective immersion in the world is considered by phenomenology as a mode of intentionality (i.e., of the object-directedness of consciousness). Phenomenology distinguishes between a thematic or objectifying intentionality (e.g., when I am aware of *this chair*), and a non-reflective, tacit sensibility ('operative intentionality'), procuring a background texture or organization to the field of experience, and so constituting our primary *presence to the world*, upon which the explicit intentionality configures its perceptual or cognitive disclosures (e.g., seeing *this particular chair*). Finally, phenomenology makes a distinction between intersubjectivity in the sense of a thematic or explicit attempt at grasping the emotions, beliefs, experiences of another (be it through a process of mind-reading, analogical inference, or explicit simulation), and intersubjectivity in the more primordial or fundamental sense of a pre-reflective attunement with others that depends on our shared engagement in a common world (25). This *triadic autistic disturbance of natural evidence* (self-disorder, loss of meaning, lack of attunement with others) is paradigmatically exposed by Blankenburg in his case study of a young female schizophrenic patient, whose main and monotonous complaint is a lack of naturalness, 'self-evidentness' or 'self-understandability' ('Selbstverständlichkeit'):

"What is it that I really lack? Something so small, so comic, but so unique and important that you cannot live without it [...]. What I lack really is the 'natural evidence' [...]. It has simply to do with living, how to behave yourself in order not to be pushed outside society. But I cannot find the right word for that which is lacking in me [...]. *It is not knowledge, it is prior to knowledge*; it is something that every child is equipped with. It is these very simple things a human being has the need for, to carry on life, how to act, to be with other people, to know the rules of the game." [...] Another patient writes to his friend: "For your happiness, your lenience and your security, you can thank 'a something' of which you are not even conscious. This 'something' is first of all that which makes lenience possible. It provides *the first ground*" (24, italics added).

The world ceases to function as a stable background of our experience. It is no longer *pregiven* as a tacit, *unnoticed* and unquestionable foundation of experience. The patient complains of not perceiving the world and others as natural, given, and familiar. The patient finds himself in a pervasive state of perplexity. Certain perceptual disorders appear to belong to this experiential pathology (e.g., sense of unfamiliarity of the familiar, sense of being overwhelmed or captivated by perceptual details). Everything may become a matter of deliberation ("Why is the grass green; why has nature chosen this particular color?"), relating to others is felt unnatural and disfigured, requiring preparatory efforts; there is no evident and easy way to choose a dress, or to be sure of one's own opinion during a conversation or a dispute. One of our patients, a schoolteacher, reported that he was utterly incapable of spotting the moment when an innocent schoolboy play was turning into a hostile fight. This loss of meaning or grip is frequently associated with an intense hyperreflexivity, i.e., an excessive tendency to monitor, and thereby objectify, one's own experiences and actions (26):

"None of my movements come automatically to me now. I've been thinking too much about them, even walking properly, talking properly and smoking - doing anything. Before, they would be able to come automatically" (27).

Experience is more observed than it is lived. This hyperreflexive tendency can in part be interpreted as an attempt at compensation, as a (futile) attempt at restoring something that has been lost. Thus, from the patient's subjective perspective, the most prominent feature is exactly a *disturbed ipseity*, in which the sense of self no longer saturates the experience, or to put it differently, there is an increasing gap or distance between the sense of self and experiencing (see details in 20). The patient feels that a profound change is afflicting him, yet he cannot pinpoint *what exactly* is changing, because it is not *a something* that can be easily expressed in propositional terms (a fact that has important implications for the nature of the diagnostic interviewing). The phrasings of such complaints may range from a quite trivial "I don't feel myself" or "I am not myself" to "I am losing contact with myself", "I am turning inhuman" or "I am becoming a monster" (18-20). The patient may sense an 'inner void' or 'a lack of inner nucleus', which is normally constitutive of his field of awareness and crucial to its very subsistence. Some of these complaints point to the alterations in the patient's 'self-presence', as if the *luminosity* of his consciousness was somehow opaque, disturbed or diminished (the term 'luminosity' refers here to the very manifestation, welling-

up or phenomenality of consciousness). The patient does not feel being *fully awake or conscious*: "I have no consciousness", "My consciousness is not as whole as it should be", "I am half awake", "It is a continuous universal blocking" (28). This is frequently associated with a *diminished affectability* or reactivity of the self, of which anhedonia is only one particular aspect. The sense of *mineness* of experience may become subtly affected: one patient reported that his feeling of his experience *as his own experience* only "appeared a split-second delayed". Another of our patients had a peculiar feeling *as if* his self, as a point of view on the world or as a pole of experience, was somehow displaced few centimeters backwards.

The disturbances of ipseity exert profound reverberations on the sense of personal identity: they create a vacuum at the very core of one's subjectivity, that deprives the patient of reliable dispositional attitudes that normally imbue cognition and emotion with a sense of typicality and familiar direction. These disturbances constitute the foundation of the more explicit and articulated anomalies of subjective experience, such as changes in the bodily self-awareness, increasing objectivation and spatialization of introspective experience (e.g., feeling one's thoughts being located in a specific part of the head or brain), disorders in the stream of thoughts (e.g., thought interference), transitivistic experiences, and certain other phenomena often designated as the "basic symptoms" (29). The autistic disorders of meaning, self-awareness, and intersubjectivity occur in the majority of the first-onset schizophrenia spectrum cases (17). In fact, these core experiential phenomena are particularly clear in their pure form mainly in the early illness stages (20). They become increasingly infused with content, and hence integrated and transformed in the emerging psychotic symptoms (30,31). It must be clear now that although the autistic features are sometimes treated on a par with the so-called "negative symptoms", the experiential anomalies and disorders so far described cannot be adequately comprehended as *mechanic lacks* or functional fall-outs. Rather they testify to a complex and profound reorganization of subjectivity, often populated, from the patient's perspective, with quite "positive" experiential anomalies.

AUTISM AND NEURODEVELOPMENT

A phenomenologically articulated account of autism entails a clinically and theory-guided search for pathogenetic factors, a search preferentially attentive to the processes involved in the early ontogenesis of human subjectivity. In other words, a phenomenological approach calls on linking a developmental psychological perspective with current views on the neurodevelopmental origins of schizophrenia. The neurodevelopmental hypothesis (NDH) has become, for the last fifteen years, the most popular hypothesis on the etiology of schizophrenia (32). Although the NDH has many versions, it basically posits that the illness is somehow related to subtle disease processes affecting critical brain circuits during early development and reaching full-blown phenotypic consequences at adolescence and early adulthood (33). The NDH is motivated by a multitude of epidemiological findings (familial aggregation, gestational and perinatal complications), higher rates among schizophrenics of minor physical anomalies, morphological cerebral changes, evidence of developmental disorders during childhood of schizophrenics, and it is partly supported by some neuropathological findings (34).

It is, however, surprising to note how little (*if at all*) consideration is paid in the NDH literature to the wealth of empirical knowledge acquired in the last decades by developmental psychology. "As secret keepers of our origins, infants are the most basic expression of what it means to be alive as humans in this world - alive with the potential for the formidable mental growth that leads infants between birth and the second year toward sophisticated self-awareness, enculturation, and discernment of a consensual world that can be talked about and thus shared symbolically with others" (35) - issues which, as we have seen, are central in the phenomenological perspective on autism.

Empirical evidence has led developmental psychologists to abandon Piaget's famous view of babies living in 'adualistic confusion' and a similar psychoanalytic notion of the initial developmental stage as a 'normal autism', i.e., inability to discriminate between self and non-self (36,37). Rather, psychologists propose that already from birth infants have a primitive core ability to differentiate between self and non-self, and that infants are attuned to their environment from the outset (35). Yet, they all agree that the development of self-awareness from a proto-self to the 'full-blown' personal-narrative adult self (38) is a complex process, intimately linked to sensori-motor achievements and development of intersubjective ties (39-41). This research direction on the ontogenesis of subjectivity appears to us as highly and directly relevant for the issue of the formation of autistic vulnerability.

At the neuropsychological level, the development of a sense of 'self-within-an-environment' largely relies on the establishment of sensori-motor equivalencies and on intermodal perception and integration, i.e., on the ability to link and match features of the world provided by distinct perceptual channels. Integration of proprioception with vision, touch or audition is particularly important (35,40). In fact, intermodal integration has been shown to play a major role in the development of most, if not all, motor, cognitive, affective and social abilities during infancy and childhood (42). The neurophysiological and neuroanatomical support of intermodal integration is not yet fully understood. However, mechanisms of intramodal binding (i.e., merging different perceptual features within one perceptual modality into a Gestalt: e.g., linking together shape, color and motion into a percept) are better known, and can probably be generalized to intermodal integration (43,44). It is proposed that binding is based on

the synchronous and often periodic firing of neuronal assemblies (45). Empirical evidence suggests that these processes are crucially dependent on structurally intact cortico-cortical connections (46,47).

The interdependence between the developmental processes rooted in intra- and intermodal binding on the one hand, and the integrity of cortico-cortical connectivity on the other hand, bridges our conceptualization of autism and the NDH. One appealing version of the NDH favors the interpretation of schizophrenia as a condition of abnormal connectivity of cortical neurons (48). A review of the evidence for altered neuronal density in various cortical regions concludes that schizophrenia is associated with reduced neuropil, particularly in the pre-frontal cortex, but probably in other cortical regions as well (49). This reduction implies a decrease in the number or size of one or several components of the neuropil, i.e., essentially axonal and dendritic branches, spines, synaptic boutons (and glial processes), and hence of the cortico-cortical connectivity (50). Animal studies have shown that cortical connections develop through phases of exuberant growth, followed by partial regressions. Although these very complex and temporally patterned processes are heavily genetically constrained, the eventual fine-grained wiring is *epigenetically* determined through sensory-driven and endogenously generated neural activity (51). In this framework, faulty developments of connectivity may be reflected in the transient or persisting developmental aberrations that are observed during infancy and early childhood of future schizophrenics (32,33,43,52), and later, in adolescence, in the emergence of the triadic autistic vulnerability described above. Empirical evidence suggests that intramodal binding abilities might be impaired in schizophrenia (44).

PATHOGENETIC AND CLINICAL IMPLICATIONS

If, as we have proposed, the disorders in the realm of self, intentionality, and intersubjectivity are at the clinical trait core of the schizophrenia spectrum disorders, then a number of implications follow. The progressive formation of vulnerability and transition to psychosis need not be seen only as cumulative neural processes leading to a series of impairments in neurocognitive functions. Rather, autism is to be considered as a fundamental transformation of the structures of subjectivity (in all its three dimensions: subjectivity in relation to itself [*self-awareness*], in relation to the world [*intentionality*], and in relation to others [*intersubjectivity*]). This transformation constitutes the *autistic phenomenal level* of vulnerability, i.e., what Minkowski called the 'trouble générateur'. The long-term course of schizophrenia is continuously patterned by this phenomenal level in the sense that the psychotic and residual symptoms are not just random eruptions from or failures of a malfunctioning brain, but reflect reorganizations of consciousness and experience in which the 'trouble générateur' always remains operative and phenomenally discernible, conferring a degree of coherence, and, in contrast to Jaspers' (53) view, a certain understandability of the psychotic symptoms. In research terms, this generative disorder may help unifying and delimiting the concept of schizophrenia spectrum, and so offer target phenomena for a pathogenetic exploration that may be closer to the biological underpinnings than the symptoms currently emphasized in the diagnostic checklists. In clinical terms, familiarity with the subtle phenotypic vulnerability features as described above may be of crucial importance for early detection and prevention of schizophrenia, which is currently impossible prior to the onset of psychotic symptoms (2). Finally, considering schizophrenia as a partly coherent and understandable reorganization of experience may profoundly modify our therapeutic approach: be it during acute phases or in the long-term care, the accent will not be put solely on reducing the symptoms, but will also acknowledge the patient's "quest for meaning" (54).

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